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ABSTRACT

Reporting on the 1977 Dallas Conference where 14 women representing 6 ethnic backgrounds explored the possibilities of expanding the role of minority women in educational research, this document includes 5 major sections (with individual summaries and recommendations), a bibliography, and an appendix. Major sections of this document present the following: defining the problem of women in research and development (previous conferences and reports are discussed, particularly the National Institute of Education reports and conferences); preparing for the conference (pre-conference study materials and beliefs are assessed as is the division of participants into 3 groups to consider questions related to K-12 educational activities, higher education, and a community based research career ladder); training minority women currently in education (needed skills are identified as communication, interpersonal, research design, quantitative, and project management skills; target audiences are identified as local education agencies, state education agencies, universities, regional laboratories, professional associations, and funding sources); expanding the role of minority women at universities (programs which universities can implement immediately are defined); training minority women via a career ladder approach (a model is presented which involves increasingly complex research skills and formal education and provides for research aides/technicians, research colleagues and interns, research adjuncts, and professional researchers). (JC)

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MINORITY WOMEN IN RESEARCH IN EDUCATION

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A REPORT OF THE DALLAS CONFERENCE ON EXPANDING THE ROLE
OF MINORITY WOMEN
IN EDUCATIONAL RESEARCH
NOVEMBER 9-11, 1977

Sponsored by
National Institute of Education
New Mexico State University
National Association for Supervision and Curriculum Development

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Toni Shen Metcalf

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Philip L. Hosford, Project Director and Editor

FOREWORD

How exciting it is to be on the cutting edge of change! Many of us felt such excitement in Dallas, Texas, November 9-11, 1977, as we participated in a significant and historic future's conference.

Addressing the problem of expanding the role of minority women in educational research and development, the participants focused their combined experience and expertise on the recruitment, training, and placement of minority women in careers as educational researchers in curriculum and instruction.

The participants recognized barriers to minority women in educational research and development. They identified needed skills and then recommended training and placement strategies to be used by regional laboratories, professional organizations, funding agencies, local and state educational agencies, and universities.

The Association for Supervision and Curriculum Development is proud to be a cosponsor of this important conference. ASCD is the only educational organization which is involved solely in the improvement of curriculum, instruction, and supervision. Through its policies and programs, ASCD has demonstrated its commitment to the recognition, development, and utilization of the abilities of women and minorities. Cosponsorship of this conference is further demonstration of this commitment.

We anticipate that this report will have a significant impact upon the behavior of individuals, institutions, and agencies which can promote

the expansion of the role of minority women in educational research and development.

How exciting it is to be on the cutting edge of change!

Elizabeth S. Randolph
President, 1977-1978
Association for Supervision
and Curriculum Development

PREFACE

Fourteen women, representing six ethnic backgrounds, focused their experience and thinking for three days upon the problem of expanding the role of minority women in educational research. Each of the women, articulate and well known in her field, brought a particular set of personal characteristics to the composition of the group including ethnicity, subject matter field, geographical background, career ladder achievement, age, and educational affiliation.

Many of us have been fortunate enough to be a part of, or at least to observe, the development of the many special relationships which often unfold when a group with so many diversities is suddenly brought together to work as a team on a common problem. This particular group of fourteen women achieved a very special interrelationship and an early working rapport that enabled them to produce the substance for a report that is alive with their personal experience. At the same time they spoke to issues and barriers that continually face countless others like themselves in as many different locations.

The editor has taken liberties in editing and arranging the material for this report, but the report is basically their work and their words. All interpretive sections of the report have been reviewed and edited by the participants in an effort to insure faithful reflection of their views.

I am pleased to make the many acknowledgments due. First, the conference and project were funded by the National Institute of Education, Grant Number

NIE-G-77-0054. Second, New Mexico State University provided partial funding and much moral and personnel support for the project. Third, the Association for Supervision and Curriculum Development gave the full weight of its prestige and staff support to the project. Fourth, ERIC-CRESS published and distributed this final report. To these four organizations the fourteen participants and project staff are all grateful.

On another level, the project owes much to the organizations which provided the valuable pre-conference materials and concepts. The American Educational Research Association (AERA) and the American Association for the Advancement of Science (AAAS) in particular, provided much valuable background. John C. Egermeier of the National Institute of Education provided us with an early draft of the NIE report so often cited.

We also acknowledge the project staff members and associates who gave of their time and effort: Becky Beckett for her management skills; Darrell Willey for his strong personal support; Donald Croft for the pre-conference self-survey questionnaire; Anne Nesbitt for her writing and photographic work; Lily Chu Bergsma, *Holly Hosford*, and Brette Monagle for editorial assistance; Judy Engelhardt for the cover designs; and Kent Taylor for typing both the review draft and final edition of this report.

Phil Hosford

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CHAPTER I

DEFINING THE PROBLEM OF WOMEN IN RESEARCH AND DEVELOPMENT

This is the report of a conference held in Dallas, Texas, November 9-11, 1977. The conference addressed the problem of expanding the role of minority women in educational research with particular emphasis on the fields of supervision, curriculum, and instruction. The priority of the conference was the establishment of guidelines to facilitate the participation of more women in research in these fields.

The participants formulated strategies for increasing (1) the pool of qualified minority women, (2) the positions available to minority researchers, and (3) the placement of qualified minority women through aggressive affirmative action. The conferees believed that attitudinal barriers against women and minorities in various societal institutions must be eliminated through effective and immediate strategies before women and minorities can enjoy equal opportunity in the field of educational research.

Much help was available before the conference, and indebtedness to those responsible for valuable work preceding the conference is hereby acknowledged. Many valuable documents and reports of preceding conferences were studied by the participants prior to their arrival in Dallas. This chapter is devoted to that background development.

The NIE

The National Institute of Education (NIE), established in 1972 under Section 405 of the General Education Provisions Act (PL 92-318), was charged

with the principal federal responsibility for studying critical problems in education; for helping teachers, administrators, and policymakers recognize these problems; and for implementing effective solutions to them. To carry out this mandate, NIE has undertaken, as one of its major responsibilities, the development of an educational research and development system.

It has become apparent within the last few years that women, particularly minority women, are under-represented in the research and development (R&D) work force. In recognition of this problem of under-representation, NIE's policy board, the National Council on Educational Research (NCER), approved a policy which seeks to increase the number of women and minorities in research and development.

NIE's first step consisted of sponsoring several invitational conferences to define the barriers preventing minority women from entering educational research and development and to offer possible strategies which could be used to overcome these barriers. By incorporating these findings into their programs, the goal of NIE in fiscal year 1977-1978 could then be to ensure equal access to research and development educational opportunities for all regardless of sex, socioeconomic status, racial, ethnic, or language background.

The NIE Report on Participation of Women and Minority Subgroups in Research Related Activities in the Field of Education

In January, 1977, the NIE produced an extensive synthesis of information concerning the participation of women and minority subgroups in research related activities in education (Egermeier, 1977). This report provided data concerning the number and percentages of women in research and examined

factors impeding the entrance of women, particularly minority women, into this field. The report pointed out that women constituted from 25 to 30 percent of the educational research and development work force in contrast to the expected 50 percent (1977, p. 0-4). The discrepancy for minority women was even more obvious; they comprise only 3.3 percent of the membership of the American Education Research Association (AERA) in contrast to the proportional expectation of 8.6 percent.

The NIE report was designed to present available data concerning the representation of women in educational research and development. It neither attempted to identify all the constraints working against the entrance of women into educational research and development nor to present all the possible solutions. However, it did identify two major, long-range constraints (1977, p. 8-1-8-3):

1. Many women, as well as minority students, have insufficient mathematical skills to meet admission requirements of most four-year colleges and universities.
2. The percentage of minorities in the U. S. population age 18-24 is substantially higher than their proportion among high school seniors preparing for college admission. These differing expectations regarding college attendance are influenced by parent, peer, teacher, and counselor who in turn shape the aspirations, motivation, and commitment of the individual student.

The short-range recommendations emerging from the NIE report were intended to provide women and minorities with incentives to acquire skills necessary for careers in research and development. The report specifically suggested (1977, p. 8-6):

1. Graduate students should be encouraged to develop the important quantitative skills.
2. Projects to improve mathematical skills should be instituted.
3. Opportunities for pre-doctoral internships providing apprentice training for potential research and development work should be offered.
4. Dissertation fellowships should be granted to enhance career opportunities for potential professionals.
5. Post-doctoral fellowships, traineeships, and internships should be made available.
6. Mid-career fellowships, traineeships, and internships should be made available to utilize those already qualified in other areas.
7. Senior faculty members should communicate the needs and opportunities of educational research careers to doctoral candidates and to decision makers in the field.

The NIE/AERA May Conference

In order to develop programs to increase the participation of women, particularly minority women, in educational research and development, NIE in conjunction with AERA sponsored a planning conference May 26-27, 1977. Each of the participants submitted papers describing the barriers to Native American, Asian American, Black, Caucasian, and Hispanic women in educational research and development. An outline of specific program suggestions was drawn up through group consensus and incorporated into the final report.

The NIE/AERA Planning Conference Report and Recommendations identified these barriers (1977, p. 5-6):

1. High schools and undergraduate institutions still tend to direct women away from academic or research careers.

2. Predominantly male faculties in colleges and universities do not develop important mentor and sponsoring relationships with women students, thus excluding them from the invisible networks which facilitate cross-institutional and cross-disciplinary communication.

3. Women's career aspirations continue to be undermined by family and cultural pressures.

4. Women are disadvantaged by the lack of training in quantitative methods, applied research skills, administrative and managerial skills, and grant procurement techniques.

5. The working female professional is disadvantaged by institutional policies developed by men for male employees, the lack of supportive services, rigid work schedules, and the lack of recognition that nonacademic experience can be relevant.

6. Minority women are additionally disadvantaged by poor quality secondary educational opportunities and barriers related to language.

To overcome some of the barriers identified by conference participants, NIE began developing a support program, with a projected 1978 fiscal year budget of \$3 million, to address many of the recommendations which emerged from the planning conference. To be included in the support program are three of the conference suggestions:

1. Regional education laboratories and research and development centers will be able to apply for experimental training and developmental project support. Emphasis will be placed upon training and employing women and minorities.

2. Proposals will be sought for institutional training and developmental projects, offering new approaches for increasing the participation of women and minorities.

3. Projects will be developed to use institutes or seminars for facilitating career re-entry or mid-career retraining for persons unable to devote a continuous, extended period of time to preparatory training.

NIE continues to offer support for further studies which might develop information concerning the status of women and minorities in research and development.

AAAS Activities

Other agencies and organizations share the NIE concern with the problem of under-representation of women and minorities in research and development. In December, 1975, the American Association for the Advancement of Science (AAAS), with the support of the National Science Foundation, sponsored a conference of minority women scientists to identify the reasons for minorities and women being under-represented in scientific research. The results of that conference, which were reported in The Double Bind: The Price of Being a Minority Woman in Science (1976), were intended as a guide for public agencies, educational institutions, professional associations, and funding organizations.

The AAAS conference analyzed and organized the problem of under-representation by dealing with it through career stage levels. For the pre-collegiate period, the participants defined barriers to potential students stemming from family, school, and social pressures. From these barriers were drawn inferences and recommendations which were then addressed

to the mass media, school administrators, curriculum developers, counselors, scientific societies, community groups, and policymakers (1976, p. 6-14).

For the collegiate and professional education period, the conference report defined academic, social, and personal barriers. Recommendations for academe, scientific societies, and public and private funding agencies were drawn up (1976, p. 15-21).

For the career and professional period, impediments to obtaining employment were further defined as were discriminations in the work setting. In addition, conflicts in male-female relations and conflicts arising from family requirements and career goals were identified and documented. Suggestions were drawn up for employers, scientific societies, policymakers, and funding agencies. The needs of the Puerto Rican, Mexican American, Native American, and Black scientist were recognized in a separate section. The need for multicultural and bilingual education was supported as a means of maintaining racial and cultural diversity (1976, p. 22-36).

The AAAS conference participants concluded their report with strong recommendations on general policy questions and requested a number of specific follow-up projects (1976, p. 37-39).

AAAS demonstrated its continuing commitment by sponsoring a second conference, October 17-20, 1977, to make policy recommendations for increasing participation of women in scientific research. The report of this conference has not been published as of this writing, but the working papers outline many recommendations for improving science education and career information. These working papers offer data regarding the demographics of the woman scientist and the societal and educational barriers such a woman encounters. In addition to considering the pressures brought

upon women to conform to traditional roles, the women identified barriers in the male-dominated field of science and developed the following recommendations:

1. Secondary schools should encourage girls to enroll in courses such as shop and mechanics which would provide familiarity with tools.
2. Undergraduate research opportunities and jobs in critical and technical businesses should be instituted.
3. University science departments should develop relations with potential employers and provide incentives for students through science fairs, workshops, and student employment.
4. Women scientists should participate in a program to recruit more scientists, particularly women scientists.
5. Mass media should be urged to change their image of the scientist as being exclusively masculine.
6. Restrictions upon post-doctoral fellowships should be eased to accommodate the re-entry of women.
7. Women should participate in all decision-making levels of the grant reviewing process.

NMSU and ASCD

Recognizing the national concern with the problem and the strength of NIE's commitment, New Mexico State University and the Association for Supervision and Curriculum Development (ASCD) joined in sponsoring the conference in Dallas, Texas, November 9-11, 1977.

New Mexico State University has long been interested in the development of minorities because of its unique setting in a tricultural environment of

Mexican American, Native American, and Caucasian cultures. This interest has also been demonstrated by the College of Education in the development of its curricula and the funding of doctoral fellowship programs in educational research and bilingual education.

Similarly, ASCD has also had a long-standing history of policy concern and interest in the special problems of women and minorities. The Association recognizes that strong commitments are necessary to develop and utilize our culturally diverse population more fully. As a result, it incorporated into its rules governing activity participation a "Right to Participate" rule, which adopts a positive stance concerning advancement of women and minorities. The ASCD specifically suggests:

1. Sexist and racist treatment be eliminated from text materials.
2. Pre-service and in-service programs be developed to advance multicultural education.
3. Multicultural settings be developed further in the schools, affording opportunities for interaction of a variety of ethnic groups.
4. Bilingualism be viewed as a positive factor, and the development of bilingual programs for monolingual students be encouraged.

A logical consequence of the common interests displayed by NIE, New Mexico State University, and ASCD was their joint sponsorship of the Dallas conference designed to expand the roles of minority women in educational research and development, especially in the fields of curriculum, instruction, and supervision.

Summary

The National Institute of Education, charged by Congress with the responsibility for developing an effective system of educational research

and development, sponsored several conferences in 1977 to determine how minority women might be trained for careers in educational research and development. The first conference was held May 26-27. A second conference, funded in part by NIE and held in conjunction with other interested organizations, took place in Dallas, Texas, November 9-11.

The Association for Curriculum Development (ASCD) cosponsored the Dallas conference as one expression of its continuing interest in the problems of minorities and the belief that particular commitments are necessary to improve the situation of minority women.

The third organization, New Mexico State University, joined NIE and ASCD in sponsoring and funding the Dallas conference because of its tri-cultural interests in the Southwest. The College of Education at New Mexico State University has demonstrated its concern for minorities and research through its bilingual programs and doctoral fellowships in educational research.

Activities of other national groups interested in the problem of expanding the role of minority women were also discussed. Special note was given to the American Association for the Advancement of Science as sponsor of two conferences on the subject within the last two years. The reports and recommendations from all such activities provided a firm base for the Dallas conference.

CHAPTER II

PREPARING FOR THE FUTURE'S CONFERENCE

Diversity of Participants

As voiced by many of the conference participants themselves, one of the strongest elements in the Dallas conference was the diverse composition of the group of participants. Diversity of ethnic background was one important factor in participant selection, and at least six different ethnic groups were represented at the conference.

A second factor of diversity was achieved through geographical representation. Participants came from New York City, Washington, D. C., San Francisco, Minneapolis, Crownpoint, New Mexico; Charlotte, North Carolina; Salt Lake City, Utah; San Mateo, California; El Paso, Texas; Jackson, Mississippi; Portland, Oregon; Tucson, Arizona; and Bethesda, Maryland.

Additionally, the women represented most rungs of the career ladder. They came from the ranks of students, principals, teachers, deans, professors, and directors. They represented professional associations, regional laboratories, Bureau of Indian Affairs and public schools, and universities.

The several different disciplines represented by the participants brought still a fourth diversity to the composition of the group. These disciplines ranged from mathematics education to sociology, bilingual education, and history.

The multiple diversities of the participants in the Dallas conference are reflected in the following four pages.

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Pre-Conference Study Materials

One month prior to the Dallas conference, the participants were sent pre-conference materials for study. These items included copies of the NIE report, records of the NIE/AERA planning conference held in May, 1977, and a concept paper for the Dallas conference, Expanding the Role of Minority Women in Educational Research and Development: A Future's Conference (Appendix, p. 49). In addition, the fourteen women were provided self-survey questionnaires to be completed before the beginning of the conference on November 9, 1977. The self-study was designed to examine each participant's ideas about barriers which might have affected her own professional advancement and to elicit her ideas for improving recruitment of minority women into educational research and development.

Pre-Conference Beliefs

Using a Likert-type scale, the fourteen participants identified those views they held in common (Appendix, p. 51). The commonalities, ranked according to strength of agreement, were found to be:

1. The majority of the participants strongly agreed that women tended to avoid classes in mathematics (Item 4).
2. Most of the participants agreed that departmental faculties were, on the whole, friendly to them (Item 10).
3. Participants agreed that it was not difficult to obtain information about their professions (Item 1).
4. Most of the women were confident of their abilities to perform in the profession (Item 9).
5. All but one of the participants agreed that information about post-doctoral positions was not readily available (Item 6).

To the list of commonalities were added other incidents, experiences, and feelings which affected the participants while pursuing college degrees. These citations ranged from personal to institutional factors (Appendix, p. 53).

Those frequently cited in the self-study included:

1. Personal support and encouragement from teachers, advisors, and family members were cited repeatedly as extremely important in providing motivation. Those participants who had not had this support believed it had a negative effect upon their career goals.
2. Family responsibilities and lack of adequate day-care facilities were cited as barriers for women seeking re-entry into the work force.
3. Various forms of male faculty patronization were viewed as negative experiences by most of the conferees.
4. Several barriers to continued pursuit of formal education were noted as being directly related to lack of financial support.
5. Other barriers were inadequate or improper counseling and the unavailability of tutorial assistance.

Types of classes and experiences that might better have prepared them for their jobs were also described (Appendix, p. 57). The conferees agreed strongly about the following ideas:

1. Opportunities to work with women with leadership skills are necessary for the development of mentor and sponsor relationships and networks of communication.
2. Courses in research methods, educational administration, and mathematics are needed for women beginning in the pre-college years. The importance and application of statistics in educational research and evaluation was especially stressed.

4. Additional training in writing skills was cited as a need by some of the participants.

Participants defined over twenty barriers (Appendix, p. 55) and offered recommendations for overcoming some of them:

1. Support should be established for awards and honors which recognize women in research.

2. Women's studies, ethnic studies, and courses related to these types of studies should be made available.

3. The development of effective communication concerning women's rights should continue, as should efforts to eliminate negative attitudes in the mass media.

4. More professional counseling about available career information is needed.

5. Supportive services are necessary to facilitate recruitment of re-entering women.

6. Financial support and equal access to educational opportunities should be made available.

The participants, in addition to identifying problems and possible solutions, were asked to list specific sources for recruiting minority women for their professions. A complete list of these suggested sources is given in the Appendix, p. 59.

Conference Beginnings

On the first day, the participants reviewed The Double Bind: The Price of Being a Minority Woman in Science, the product of the first American Association for the Advancement of Science conference, and the working papers from the follow-up conference sponsored by the same association.

For the first part of the day, the participants considered the findings of the previous conferences and studies and discussed their own personal experiences and ideas concerning the barriers impeding the advancement of minority women in educational research and development. After considering the problems cited in previous studies, the group concluded that the barriers previously named and documented were valid and corresponded to the group's own experiences.

Within a half day the participants consolidated their own personal experiences sufficiently to absorb, discuss, and accept the findings of previous studies. They then assigned themselves the task of answering, within the two remaining days of the conference, the major questions of: "What can be done?" and "Who will do it?"

To answer these questions, the participants formed three working groups. Each group was assigned one of the following topics:

1. How can people currently in K-12 educational activities and organizations be retrained for research and development?
2. How can universities provide the recruitment programs and placement essential to expanding the role of minority women in research and development?
3. How can a community-based research career ladder be developed for continuous re-entry opportunities?

The concepts, conclusions, and recommendations formulated by these three subgroups form the basis for the next three chapters of this report.

Summary

Conference participants were chosen to include many diversities including those associated with ethnic background, geography, professional career ladder advancement, subject matter disciplines, and institutional organizations.

One month before the conference, participants received the NIE report and the report of the NIE/AERA conference held in May, 1977. Conferees also received self-study questionnaires which they completed before the beginning of the conference.

Several issues, including both long-term and short-term factors, which were considered impediments to the advancement of minority women were identified with consistent frequency. A review of the questionnaires revealed that the findings of previous conferences correlated with experiences of the Dallas conference participants.

Before considering the question of what to do about the barriers confronting minority women developing careers in educational research, the participants discussed the NIE report and the report of the NIE/AERA planning conference held in May. They also considered The Double Bind: The Price of Being a Minority Woman in Science and the working papers from the AAAS October conference.

Within a half day the participants were able to absorb the findings of previous conferences and to begin addressing themselves to the problems of what could be done and who should do it. They divided into three working groups to consider the questions as they related to (1) those relevant to K-12 educational activities, (2) those of concern to higher education, and (3) those dealing with a community-based research career ladder.

The formulations derived from these three working groups are reported in the three chapters which follow. For more definitive discussion of any of the points found, the reader is invited to contact any of the participants.

CHAPTER III

TRAINING MINORITY WOMEN CURRENTLY IN EDUCATION

The Needed Skills

The first subgroup considered the problem of training minority women currently working in K-12 educational settings. The group began by identifying skills necessary for educational research:

1. Excellent communication skills, both oral and written, are essential for a career in research and development. Technical proposal writing must be of high enough quality to compete successfully for available research funds.
2. Well developed interpersonal skills are needed at various levels, for the researcher will be involved with teachers, principals, and researchers as well as with superintendents and directors.
3. The researcher should have access to the informal network of professional educators throughout the nation. This network should include both men and women in educational research and the broader areas of education.
4. The researcher should master research design and such quantitative measures as computer and statistical analysis.
5. Skills in initiating and managing a project are essential to the competent researcher. These skills include those related to budgeting, staffing, supervising personnel, evaluating and coordinating project operations.

The Target Audiences

Within the parameters of these research requirements, the group designed recommendations for specific target audiences to expand the role of minority women in educational research. These audiences included those agencies involved with the prospective researcher from kindergarten through the twelfth grade, the local and state educational agencies, the universities, professional associations, and funding agencies.

1. Local Education Agencies

Local education agencies, working alone or with other education agencies, can do much to expand the role of minority women within their own districts and other districts. However, no change will be forthcoming unless a school board adopts a policy to expand the role of minority women. Within each local education agency's district, many helpful programs could then be developed to implement these recommendations:

- a. In-service training programs should be created.
- b. Released time for study should be provided.
- c. A program of position preparation should be achieved by creating training positions with educational researchers who anticipate vacating their positions within one year.
- d. Internships which offer training experiences and stimulate interest should be instituted.
- e. The educational researcher should be allowed to take a leave of absence without fearing the loss of position.

In addition to guidelines for improved staffing patterns, the group proposed that local educational agencies should take vigorous action to identify minority women who are potential researchers and make them aware of their opportunities in educational research. Such positive steps taken by local agencies to foster recruitment of minority women into educational research and development can provide role models and future sponsors for others.

2. State Education Agencies

State agencies must become more active in expanding the numbers of minority women in educational research and development. An aggressive policy is necessary to recruit minority women. State agencies have the capability of providing internships, in-service training, released time, and position preparation programs. Suggested procedures include:

- a. State agencies should work cooperatively with other education agencies to implement undergraduate field-based research experience and graduate research internships.
- b. State agencies might well develop a consortium with local agencies to provide the intern with exposure to different levels and types of educational research.
- c. State agencies should serve as liaison with local agencies in the recruitment of minority women.

3. Universities

In conjunction with local and other educational agencies, universities should direct minority women towards educational research in the following ways:

- a. Field-based research must be provided at the undergraduate level. The program should provide a minimum of one semester offered parallel to student teaching.
- b. Graduate research-oriented internships should be offered through a joint effort of the university and local agencies. These internships should ensure that the activities built into them would be of mutual benefit to both the intern and the sponsoring agencies.
- c. A university's continuing education program should become a liaison between the university and state education agencies. Continuing education programs can provide valuable services by sponsoring workshops for the districts as well as providing needed consultant services.

4. Regional Laboratories

These organizations can play an important part in enlarging the role of minority women in research and development by implementing these recommendations:

- a. Develop staffing patterns which systematically and actively recruit minority women.
- b. Provide internships in cooperation with local districts, state agencies, and universities.

5. Professional Associations

Professional associations also play an important role in recruiting minority women. They are most effective when they:

- a. Institute workshops to develop the necessary skills for research.

- b. Publish articles and entire journal issues devoted to the problem of expanding the role of minority women in educational research.
- c. Program slots at regional and national meetings reserved for the problem of recruiting minority women in research in order to give the issue further visibility.
- d. Invite minority women presently in research and development to speak at association banquets and meetings.
- e. Provide for fellowships and internships for minority women interested in educational research.

Participants suggested that all parties mentioned--local and state agencies, universities, professional associations, and other organizations which provide guidance and career counseling--should formulate programs to make counselors sensitive to opportunities for minority women in educational research and development. This counseling should emphasize the appropriateness of the career for minority women and should begin at the elementary level and continue through intermediate and secondary levels. Such counseling should reach not only the student but also the community at large since many community organizations can provide a major source of recruitment for minority women interested in educational research and development.

6. Funding Sources

The participants recommended that NIE provide information about its programs which specifically deal with the needs of minority women in research and development. This information should identify any funds available to train women presently in the field of education.

After formulating their recommendations, the members of the subgroup presented them to all conference participants. Recommendations were discussed point by point to insure complete understanding of each concept; then, by consensus, the group accepted the recommendations. Members of the subgroup, even while being aware that their recommendations should be both practical and potentially adoptable, had little difficulty composing recommendations for training women presently in education for future careers in research and development.

Summary

The first subgroup defined the skills necessary for the researcher: communication expertise, both spoken and written; interpersonal skills; dialogue abilities within the informal network of researchers throughout the nation; research design and quantitative measurement skills; and project management skills. To help minority women acquire or further develop these skills, the subgroup drew up recommendations for target audiences.

The first audience, local and state agencies, could adopt positive staffing patterns through such policies as released time, provision of internships, in-service programs, leaves of absence, internal promotion, and position preparation.

Universities, a second audience, are capable of providing graduate internships, field-based research, and liaison through continuing education programs.

Regional laboratories can develop staffing patterns to actively recruit minority women and to create internships.

Professional associations might institute workshops aimed at developing research skills of minority women, devote articles and entire journal issues to the problem of minority women in research and development, invite minority women to speak at conventions and banquets, and provide internships for minority women interested in research. To give the matter still more visibility, professional associations should reserve program slots for minority women at regional and national meetings.

CHAPTER IV

EXPANDING THE ROLE OF MINORITY WOMEN AT UNIVERSITIES

Since universities are the institutions which train and employ the greatest number of researchers, the second subgroup considered guidelines which should be implemented by the universities to expand the numbers of trained minority women. Universities should have impact in three areas by:

1. Increasing the number of minority women candidates in educational research and development.
2. Increasing the number of faculty positions available for minority women already trained in educational research and development.
3. Increasing opportunities for minority women to re-train in the research and development areas.

Increasing the Number of Candidates

Universities must employ a number of strategies to increase the number of minority women candidates at both undergraduate and graduate levels.

1. Admission Requirements

Colleges and graduate schools should re-examine entrance requirements and emphasize exit requirements. On the undergraduate level, less emphasis should be placed upon full-time enrollment as opposed to part-time enrollment. Graduate schools should reconsider requirements stressing grade point averages and Graduate Record

Examination scores. Specific recommendations for helping overcome admission requirement barriers include:

- a. More minority women should be admitted on a part-time basis.
- b. Minority women meeting all requirements for admission to graduate school except the minimal 3.0 average should be granted provisional admission. Further, minority women should be allowed one or two quarters or semesters to achieve a 3.5 average.
- c. Graduate Record Examination verbal scores should be weighted more heavily than mathematical scores.
- d. Minority women should be encouraged to enroll in Graduate Record Examination review courses.

2. Supportive Services

Multiple supportive services should be offered on a continuum throughout the minority woman's professional development so that she might better obtain successful educational experiences. Services which would attend to the minority woman's social, emotional, and financial needs during her days as a student include:

- a. Universities should provide day care facilities at little or no cost to the student through campus schools or early childhood laboratories. If no such services exist at the university, alternative facilities should be made available near the college or the student's home.
- b. Individual and group counseling by women's organizations and other appropriate groups should be provided in order

to assist the minority woman student in dealing with socio-cultural and emotional barriers encountered. Such programs can be implemented on campus, in local homes, and through telephone communication networks designed to serve this function.

- c. Universities should provide for individual counseling and groups dynamics sessions for the minority woman student with trained counselors.

Women's groups and organizations should be provided with the necessary on-campus facilities to capitalize on the availability of such counseling services.

- d. Minority women should be encouraged to continue study in mathematics and science since maintaining minimal competencies in these areas is prerequisite to acquisition of the statistical skills necessary for much educational research and development.
- e. Special attention should be given to arranging job interviews and assisting in the initial placement of the minority woman.
- f. Financial support for the minority woman student should be provided through loans, grants, and scholarships. Moreover, loan policies should be flexible enough so that part-time students can avail themselves of financial aid. Whenever possible, the university in conjunction with the business community should develop short-term employment opportunities.

Increasing the Number of Faculty Positions

In addition to increasing the number of minority women candidates in higher education, an important second area of consideration is that of increasing employment opportunities for qualified minority women. The group considered five strategies to create more faculty positions available for minority women already trained in educational research and development:

1. High tenure rates in universities indicate that a review of tenure policies is needed to evaluate current faculty employment status. Opportunities must be provided for younger doctoral graduates, including minority women, to be employed in "hard" money as opposed to "soft" money positions.
2. Promotion policies should be reviewed and revised to make scholarly activity requirements more flexible. Value should be given to participation in conferences, colloquia, national panels or programs, writing journal articles (in lieu of books), and the performance of community services. Procedures should be devised to provide for time employed on "soft" money to count toward tenure and promotion wherever performance evaluations have been accomplished on a regular basis.
3. The university, and all women within the university, should recognize and counteract the "Queen Bee" syndrome in which the academic female researcher relishes her position as a successful woman and is reluctant to provide assistance and encouragement to other women and minorities. These women can play important mentor roles, and the reward system of the institution should encourage such mentor role activity.

4. Universities should provide opportunities for minority women to be assigned to tasks other than administration of projects. In this way their work can be evaluated through typical faculty evaluation procedures, and they may continue their development in teaching and research.

5. Provision of day care services for children of minority faculty women is essential. Such support provided by the university will open additional employment and growth opportunities.

Increasing Opportunities for Re-training

The third area considered at the university level was that of re-training opportunities. Such opportunities should be provided to minority women currently employed but not engaged in research activities. Procedures for opening up such options to the minority woman include:

1. Team teaching opportunities should be provided in such disciplines as anthropology, sociology, and history which utilize research skills that can be applied legitimately to educational research.

2. Faculty assignment and scheduling should be reviewed to provide for released time for re-training. Faculty should be permitted to enroll in statistics, mathematics, and research design courses.

3. Time should be provided so that the minority woman on the faculty may work for and with various women's organizations as well as counsel with other women when appropriate, regarding the problems of working mothers and wives. The minority woman faculty member is a valuable model for undergraduate women and can play a critical role in convincing young women that it is rewarding for a woman to be employed in educational research and development.

4. Universities must refurbish the credibility of their equal employment policies and affirmative action programs by ceasing to showcase the "token" minority woman. This will involve not overloading the minority woman faculty member with highly visible committee work and other nonteaching, nonresearch activities.

5. Universities should develop working arrangements with school districts employing minority women. These cooperative arrangements should include the assignment of minority women to work in program evaluations under the guidance and supervision of a university faculty member. Such arrangements result in mutual benefits: the school district's program evaluation needs are met, and the minority woman has the opportunity to further her training or to work on an advanced degree in educational research.

6. Universities must engage in curricular and program revision. Program completion must be based upon competency, but flexibility should be built into program completion designs. This flexibility is especially important to the re-entering woman who may experience difficulty in returning to an educational setting. Criteria of flexibility in program completion should include:

- a. Refresher courses in statistical skills are offered in the early re-training period.
- b. Field-based courses are developed and conducted on site at schools, colleges, and business locations to accommodate full-time employees.
- c. All appropriate courses both on campus and in the field are scheduled in early evening or noon hour time periods.

- d. Weekend and short courses are offered on a flexible time-of-completion schedule. Specific course requirements such as those common in a statistics course, are extended.
- e. Graduate programs in educational research include and accept other research methodologies such as clinical methods, field methods, historical analysis, and methods commonly used in other social sciences.

Recommendations for Target Audiences

The members of the subgroup identified other organizations besides the university which could aid in recruiting, employing, and re-training minority women.

1. Regional Laboratories

Regional laboratories and other funded centers throughout the nation should employ more minority women at decision-making levels. These laboratories and centers can play decisive and crucial roles in both the training and employing of minority women in educational research and development.

2. Professional Associations

Professional associations can increase the number of minority women in research and development by:

- a. Developing position papers concerning minority women in research and development.
- b. Encouraging and supporting minority women caucuses.
- c. Creating rosters of minority women and their respective areas of expertise.

- d. Placing minority women in leadership roles.
- e. Offering special recognition to minority women in research and development through awards and honors.

3. Funding Sources

The role of the federal grant as an advocate for minority women's employment is a powerful lever in increasing the number of qualified and employed minority women in educational research and development. Strong affirmative action stipulations must be tied to the awarding of federal funds.

Summary

Programs which universities can implement immediately are defined. Universities are challenged to act affirmatively to increase the numbers of minority women in research and development. Although the recommendations are short-term solutions, they will ultimately affect the long-range barriers to minority women in educational research.

The domino effect of the recommendations is apparent. To increase the numbers of minority women, the universities must train more qualified candidates by actively recruiting women into research programs by revising admission requirements and providing supportive services.

Universities must change policies which act as barriers to the undergraduate and re-entering minority woman and, finally, they must be flexible in creating programs for re-training women already employed.



CHAPTER V

TRAINING MINORITY WOMEN THROUGH A CAREER LADDER APPROACH

The third subgroup recognized that in addition to the barriers to opportunities for training and employment, there are barriers based in family, cultural, or community norms and expectations which impede efforts of minority women to enter research careers. Some of these negative expectations derive from previous interactions of the minority community with the research establishment wherein research efforts visible in the community have proven irrelevant or even detrimental to the community. In addition, economic and familial responsibilities of the minorities frequently prohibit the full-time college freshman-to-Ph.D. pattern often followed by the majority student.

In order to address these barriers, the subgroup developed a model of a career ladder firmly based in the community to prepare minority women as researchers in both basic and applied areas of education. Such a career ladder model would enable minority women to see a research career as both a desirable and an available option, and as an extension of their concern for solving community needs. Additionally, it would help mobilize community support and recognition of the value of minority women in research endeavors. Thus, the special sensitivity of minority women to the needs of their community together with their unique experiences, skills, and insights, can broaden and enrich the total knowledge base in order to solve basic community issues from within.

The Career Ladder

The Career Ladder has four major rungs, as illustrated in Figure 1.

Step 1. Research Aides and Technicians

Community persons as well as high school and undergraduate level students should be recruited and incorporated into this stage of the ladder. Aides should be trained in research skills including data collection, interviewing techniques, and general community outreach. Data processing skills such as tape rating, scoring tests, coding forms, and categorizing should be taught to the technicians.

Step 2. Research Colleagues and Interns

Colleagues should include persons at the B. A. or M. A. level, including full-time teachers who are involved in part-time research and evaluation. Interns should include upper division undergraduate or graduate students assigned to part-time research and evaluation processes.

Step 3. Research Adjuncts

Adjuncts are persons above the master's degree and are capable of coordinating community research activities. They serve as technical assistants to local educational agencies, state departments of education, regional laboratories, and universities. Adjuncts should have clear specialty skills in research and provide the needed direction, supervision, and work in a variety of research activities.

Step 4. Professional Researchers

Professional researchers should have the doctorate and would practice their professional skills at the national,

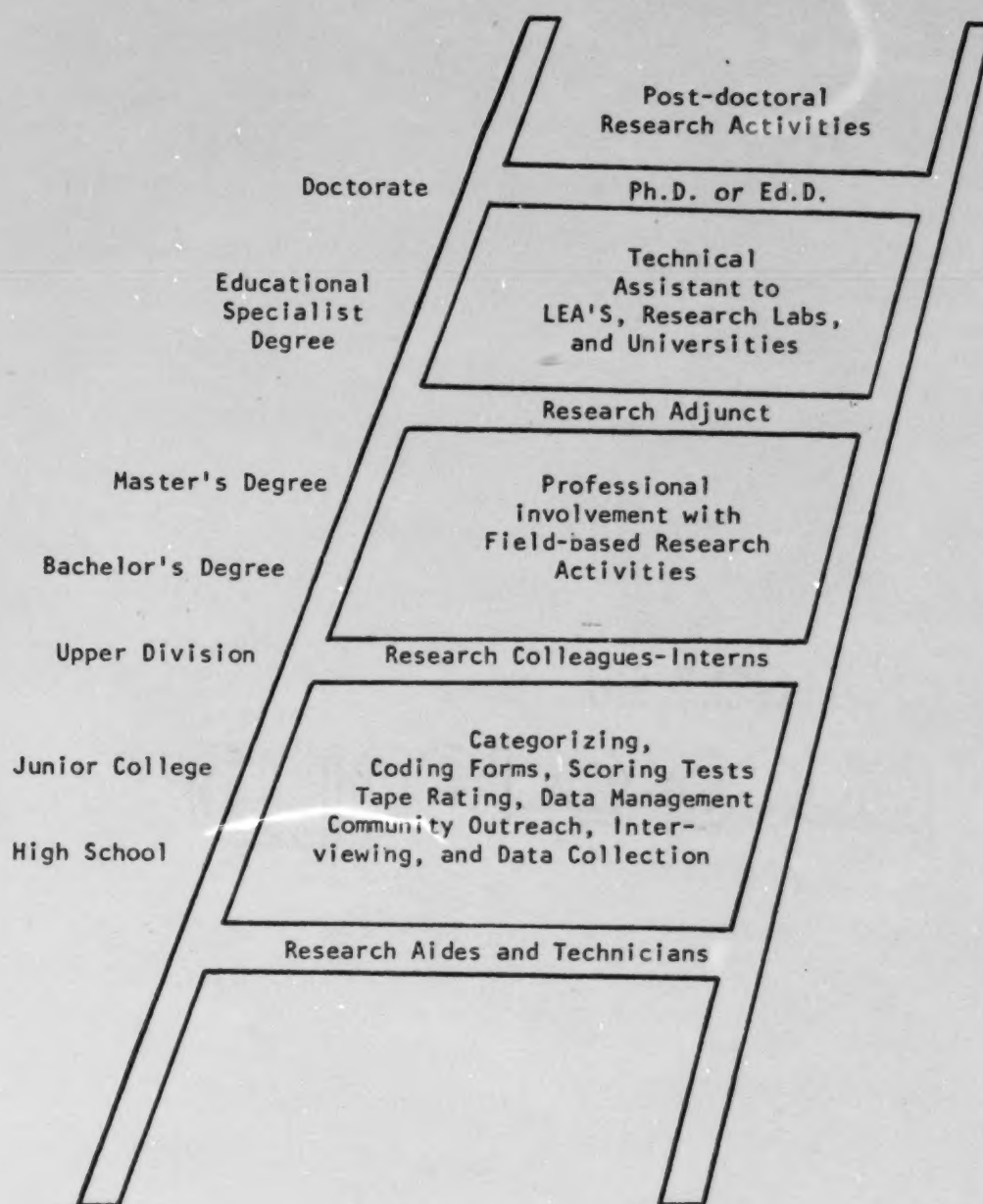


FIGURE 1

THE CAREER LADDER

Illustrative Levels of Formal Education, Activity, and Responsibility

state, local, and university levels. These persons serve as role models and mentors to all those at the three previous steps of the career ladder.

An enabling objective for implementing this career ladder is the achievement of community control and management of applied research to demonstrate its relevance, insure its beneficence, engage community support for research careers, and provide minority women role models at each step of the ladder.

The subgroup developed the following guidelines associated with the career ladder for state and local education agencies, universities, professional associations, and funding agencies.

Local Education Agencies

1. Local education agencies, parent advisory boards, tribes, and other minority organizations should preferentially review research proposals to include at least two steps on the career ladder for minority women.
2. Local education agencies should require minority women liaisons from research organizations and funding agencies.
3. Released time should be provided for on-the-job training of research aides and technicians functioning at the first level of the career ladder.
4. The presence of minority women researchers in the community should be utilized to expose high school students to alternative life styles and career opportunities.
5. Local education agencies should cooperate with all levels of the research establishment to provide training opportunities for

community personnel in educational research and development skills.

6. Local agencies should screen employment at the bottom rung of the ladder by establishing special qualifications important to their community such as language skills, linguistic knowledge, cultural knowledge, community rapport, and permanency of residence in the community.

7. Local education agencies must insure that counselors present educational research as a career option for minority women and provide assertiveness and/or independence training at elementary and secondary levels to enable the minority female student to choose freely among her options.

8. Classroom teachers should utilize information-processing skills in classroom teaching with students to provide them with a basis upon which they can later build research skills.

State Education Agencies

1. State agencies should provide training in research management and grant procurement skills needed in local education agencies.

2. State agencies should particularly recommend and support the funding of those projects which incorporate career ladder elements.

3. State agencies should give special recognition to local projects which incorporate several elements of the career ladder.

Universities

1. Entrance requirements should be de-emphasized and exit competencies established and designed for minority women in educational research.

2. Credit or equivalency recognition should be given for past experiences which can be demonstrably related to academic training.

3. On-site training to develop skills at the entry level of the career ladder should be provided by the universities.

4. Independent studies tailored to the needs of minority women in developing research skills should be provided and encouraged as available options.

5. Universities should promote part-time progress options.

6. Local resources and services within the community should be utilized, with systematic supervision, to train additional personnel.

7. Flexible leave options are essential to increase faculty interaction with the community.

8. Community persons should be involved at all levels of research including hypothesis generation, data gathering and the interpretation and reporting of results to both the community involved and the community at large.

9. Competencies for employment at each level of the career ladder relevant to the specific research task should be specified.

Professional Associations

1. Professional associations should identify and provide public recognition for good community-based research programs which involve minority women on at least two steps of the career ladder.

2. Professional associations should recognize the validity of projects which incorporate several career ladder components. This recognition can be most helpful when the association adds the weight

of its professional prestige in recommending such projects to funding agencies.

3. Well written reports of quality research involving career ladder components should be given priority in professional association publications.

4. Priority at annual association meetings and conferences should be given to panels and presenters representing several levels of the career ladder.

Funding Agencies

1. Funding priority should be given to those projects which incorporate the career ladder components.

2. Funding agencies should determine and provide realistic time lines for projects which develop local personnel competencies.

3. Projects relevant to needs originating in the community should have priority in funding and technical assistance.

4. Experimental and/or demonstrative projects should be funded to develop a model research program involving all levels of the career ladder. Such projects should have the cooperation of the local educational agencies, the community, official minority organizations, state education agencies, higher education, and the funding agencies in both the planning and implementation stages.

Summary

A research career ladder model is presented to promote the expansion of the roles of minority women in research in education. The model provides for research aides and technicians, research colleagues and interns,

research adjuncts, and professional researchers. Each level of the ladder requires increasingly complex research skills, and each level is associated with a progressively higher level of formal education. Implementation of the career ladder model will increase the number of role models visible in the community and provide a more positive environment for minority women in research. Use of the career ladder model will also create in the community and the families of potential researchers a more positive attitude toward a research career and increase the motivation and incentive to enter educational research activities.

Guidelines for implementing the career ladder model are provided for local and state educational agencies, universities, professional associations, and funding agencies. Each of these organizations should use its influence to implement the model and help increase the positive research experience for both the community and minority women.

EPILOGUE

The genuine feeling of cooperation and camaraderie among the conferees during the Dallas conference helped generate proposals for three post-conference items.

1. National Open Hearing

A panel report of the Dallas participants is scheduled for the Annual Conference of the Association for Supervision and Curriculum Development, March 4-8, 1978, in San Francisco, California. This special session is designed to inform all interested parties of the work of the group and to respond to any questions engendered by the written report of the conference.

2. Follow-up Business Meeting

A breakfast meeting is scheduled for the Dallas participants and their guests to plan further follow-up actions. This meeting is scheduled for March 6, 1978, in the Whitney Room of the Hilton Hotel, San Francisco, beginning at 7:30 a.m.

3. Recommendation for a Follow-up Conference in 1978

A second conference should be held in 1978.

The problem addressed by the Dissemination and Resources Group of the National Institute of Education has two aspects. The first deals with the historical and current under-representation of women and minorities in the field of educational research. The second deals with the adverse effects of that under-representation upon the

overall effectiveness and value of educational research and related work.

The Dallas conference addressed itself to the first aspect of the problem, i. e., how to expand the role of minority women in educational research. The conference priority was to establish recommendations wherein more women could be involved including women currently in the field of education--but not educational research--as well as those at various stages of the career ladder from high school through the doctoral level.

The second aspect of the problem, i. e., the adverse effects upon the overall effectiveness of research, was not considered at Dallas in any formal way. Therefore, another conference should be held in 1978 to pursue the second aspect and to address the program goals delineated by NIE:

- (1) To explore alternative approaches to educational problems of high priority to minority women.
- (2) To strengthen the credibility of research-based approaches to solving problems in education, especially for minority women.

The implementation of such a conference in 1978 should involve the same participants to avoid repetitive backtracking and to insure continuity and credibility. Both the Association for Supervision and Curriculum Development (ASCD) and New Mexico State University (NMSU) should be encouraged to cosponsor the conference. These two organizations should continue to seek ways of combining their resources in

a collaborative way with resources that may be available from the National Institute of Education and other agencies and organizations.

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APPENDIX

CONFERENCE CONCEPT PAPER

(Expanding the Role of Minority Women in Educational Research)

Overview

A national three-day conference to be held in Dallas, November 9-11, 1977, to which fourteen of the nation's well known women in education are invited as participants. Careful consideration will be given to inviting participants from Black, Hispanic, Oriental, Native-American, and Caucasian groups.

Goal

To produce guidelines and recommendations which will provide for increased numbers and expanded roles of minority women in research in curriculum and instruction (C&I) areas.

Agenda

Wednesday a.m.

Introduction and Orientation
Financial Reimbursement Procedure
Individual Participants' reports of Self-Study
Problem identification

Agenda development dealing with the following topics:

barrier identification, methods for overcoming barriers,
sources of recruitment, methods of recruitment, program
description, specific subject matter needs, specific
research area needs, institutional attitudes, placement
problems and recommendations, cost factors to the individual,
institution, and government.

Wednesday p.m.

Work session

Thursday all day

Work sessions

Friday a.m.

Synthesis, planning for final revision, writing, production and dissemination of guidelines and recommendations.

Anticipated Products

- Report of the Conference (Guidelines and Recommendations: 120-200 page book)
- News Release and copy for ASCD News Exchange
- Highlights presented in Educational Leadership
- Brochure on recruitment of minority women
- National roster of women in C&I Research with special emphasis upon minority women

Anticipated Results

1. Wide dissemination of products (ASCD, NIE, and ERIC). ERIC-CRESS is cooperating with the project in the production and dissemination of the final report of the Conference.
2. Professional Associations review and adopt guidelines and recommendations.
3. Minority caucuses support usage of guidelines and recommendations.
4. University departments of C&I/Research implement recommended programs.
5. Follow-up Conference next year

Philip L. Hosford, Project Director
October, 1977

FACTORS AFFECTING PARTICIPANTS IN OBTAINING AN EDUCATION

While attending college, specifically in graduate school, many factors, both individual and from organizational policies, helped or hindered you in obtaining an education and experience. Please indicate on the following scale whether you "agree" or "disagree" that the following affected you.

College Experience	Strongly Disagree	Disagree	Agree	Strongly Agree	Strength of Agreement
1. It was difficult for you to obtain information about your profession at the university.	3*	9*	1*	0*	-14**
2. The professors did not encourage you to enter the profession.	3	7	2	1	-9
3. The professors helped you obtain a position after your graduation.	4	3	3	2	-4
4. Women tend to avoid classes in mathematics.	0	2	4	7	+16
5. It was difficult to find information about occupations in educational research.	0	3	5	3	+8
6. Information was not readily available about postdoctoral positions.	0	1	7	3	+12
7. You would have preferred having an on-site internships during graduate school.	1	3	2	4	+5
8. There were few other women in your classes.	3	4	5	1	-3

*Numerals in these columns represent the number of participants selecting each response category.

**Numerals in the last column were obtained by assigning -2 points for each strongly disagree tally, -1 point for each disagree tally, +1 point for each agree tally, and +2 points for each strongly agree tally.

<u>College Experience</u>	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Strongly Agree</u>	<u>Strength of Agreement</u>
9. You were unsure of your ability to perform in the profession.	5*	5*	3*	0*	-12**
10. Departmental faculty, on the whole, were friendly to you.	0	2	5	6	+15
11. You would have preferred having a post-doctoral position.	2	6	2	1	-6
12. It was difficult for women to obtain graduate assistantships in research	0	2	9	1	+9
13. Conflicts with your family impeded your attainment of a degree.	5	2	4	2	-4
14. It was difficult for you to obtain financial support from assistantships in graduate school.	3	2	5	0	-3
15. It was difficult for you to resolve some of your own feelings about a woman's role in your profession while attending college.	7	2	3	1	-11
16. University administrators tended to place women in teaching positions.	1	2	6	3	+8

*Numerals in these columns represent the number of participants selecting each response category.

**Numerals in the last column were obtained by assigning -2 points for each strongly disagree tally, -1 point for each disagree tally, +1 point for each agree tally, and +2 points for each strongly agree tally.

OTHER FACTORS INFLUENCING THE PARTICIPANTS

Conferees cited additional feelings and incidents, not mentioned in the Likert evaluation, which colored and shaped their collegiate experiences. The negative factors they listed were

1. Lack of family encouragement created pressures.
2. Family responsibilities and lack of financial support acted as barriers to the re-entering woman student.
3. Lack of exposure to and interaction with other minority students were cited as negative experience.
4. Male faculty patronization took various forms for a number of conferees. One adviser encouraged a participant to leave the secondary level for the elementary level in order that she might find employment. Another adviser told a participant that she ought to stay at the local university, close to the family setting. A third participant stated that the male faculty demonstrated their hostility to her in their grading. Another woman felt excluded as the only woman present in an otherwise male faculty.
5. Being the only minority woman in a particular doctoral program created pressures for another participant.
6. Another woman was removed from her graduate assistantship because she married a man in the same department.
7. One participant experienced difficulty in changing fields in graduate school.

8. Inadequate child care facilities hindered one participant.
9. Lack of tutorial assistance created a barrier for one minority woman.

Positive factors cited by some of the participants drew expressions of regret from others that they had not been exposed to similar experiences.

These factors included:

1. Teachers and graduate school advisers actively encouraged one woman in the pursuit of her degree.
2. A private undergraduate institution with a strong academic reputation actively recruited another participant.
3. Teachers and family actively supported another woman; competitive classmates provided additional motivation and incentive.
4. A graduate program, which conscientiously recruited minority men and women, offered a graduate fellowship to one woman.
5. Another woman experienced positive encouragement from her graduate program staff.
6. Exposure to other minority students benefited one participant.
7. Another participant who had engaged in student government considered it a positive experience.

ELIMINATING BARRIERS FOR MINORITY WOMEN

Participants defined these specific barriers and offered recommendations for overcoming some of them:

1. Sexism in family nurturing, educational settings, and cultural settings should be eliminated.
2. Financial aid should be made available to minority women since these women have long been discriminated against on the basis of their socioeconomic class.
3. The traditional social and historical exclusion from educational opportunities or at best an inequitable access to these opportunities must cease.
4. Racism and sexist elements in entrance requirements must be eliminated.
5. Male faculty prejudice must be overcome or negated.
6. Inadequate counseling must give way to better counseling.
7. Information concerning job opportunities should be disseminated more fully.
8. Awards and honors for women in research should be supported to provide incentives and recognition that women are able to enter such fields.
9. Women should be encouraged by counselors to enroll in mathematics and logic courses.
10. Interaction with faculty is impeded by lack of minority women

professors. Administrations should be pressed to hire more women.

11. Access to adequate child care facilities should be provided.
12. Negative attitudinal and cultural elements in the media must be eliminated. The media should also promote information on women's rights.
13. Equal pay for equal work must become a reality.
14. Women's studies, ethnic studies, and studies in other relevant areas are necessary.
15. The few minority women training for educational research and development should be encouraged to cooperate with rather than compete against one another.
16. The reluctance of the minority woman researcher to act as a mentor must be overcome.
17. Institutional attitudes and policies must be restructured to include motivation or incentive.
18. The special needs of the minority woman should be recognized and provided for beginning in junior and senior high school.
19. The "old boy network," which has denied minority women access to available opportunities, should be made more flexible and accessible.
20. Minority women should be encouraged to develop self-confidence and assertiveness despite cultural taboos.
21. A system for identifying promising minority women at the junior high school level is needed.

PREPARING THE CANDIDATE FOR A RESEARCH POSITION

The participants described some of the possible classes and experiences which would better prepare the minority woman for a research position:

1. Statistical courses which have educational applications would be valuable.
2. Internships and exchange programs would be desirable.
3. Courses which deal with computer print-outs and terminology are needed.
4. A writing skills course is necessary.
5. Experiences which expose students to administrative responsibilities should be incorporated into training courses.
6. An applied course in research skills is needed.
7. Graduate research assistantships should closely simulate actual research situations.
8. A course in applied logic emphasizing logical analysis and synthesis would be invaluable.
9. More assistantships for minority women are needed to provide required teaching background for C&I doctoral programs.
10. In-service research workshops should be instituted.
11. Field-based experiences are needed to enable students to design and to evaluate specific programs.
12. Mentor or sponsor relationships and access to the informal communication network are necessities.

13. Opportunities should be offered to work with women who possess leadership skills.
14. A social research methods course should be offered.
15. Mathematics for women should be emphasized beginning at the secondary level.
16. Educational administration and research evaluation courses are needed.

SOURCES FOR RECRUITING MINORITY WOMEN

In addition to more widely known sources, the participants cited these specific sources for recruiting minority women into educational research and development:

1. Mexican American Studies Committee, University of Arizona
2. Catalysts: National Network of Local Research Centers for Women
3. National Urban Fellows Program, Yale University
4. Educational Administration Program, Atlanta University
5. National Puerto Rican Forum, New York City
6. Rockefeller Program for Educational Leaders, New York City
7. Aspira of New York
8. Aspira-Rockefeller Program for Urban Education, Fordham University
9. Asian-American Studies Departments of
 - a. University of California, Berkeley, Los Angeles, and Davis
 - b. San Francisco State University
 - c. San Jose State University
10. Pacific Citizen, 355 East First Street, Rooms 305-307, Los Angeles, California 90012
11. Indian Education, NIEA, 1115 Second Avenue South, Minneapolis, Minnesota 55403
12. Bulletin, NIEA/Project MEDIA, 1115 Second Avenue South, Minneapolis, Minnesota 55403

13. American Indian Libraries, American Library Association,
50 Huron Street, Chicago, Illinois
14. Wassaja, Indian Historical Society, 1405 Masonic Avenue,
San Francisco, California 94117
15. Akwesasne Notes, Mohawk Nation, via Rooseveltown, New York 13683
16. American Historical Association
17. National Council of Negro Women
18. Alpha Kappa Alpha Sorority
19. National Association of Black School Educators
20. N.A.A.C.P.
21. Urban League
22. Association for Supervision and Curriculum Development (ASCD)
23. Coalition of Indian Controlled School Boards, Denver, Colorado
24. All predominantly Black undergraduate educational institutions
25. Women's studies programs and women's organizations